

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 to 6 (canceled).

Claim 7 (currently amended). A valve regulated lead acid electric cell comprising:

- a sealed housing;
- a positive electrode positioned in the housing;
- a negative electrode positioned in the housing in spaced relationship from the positive electrode;
- an electrolyte in said housing in contact with said positive and negative electrodes;
- a gas space within said housing;
- a pressure relief valve which allows gas to escape from the housing and which prevents oxygen gas from outside the housing ~~to contact~~ from contacting said negative electrode;
- a gas-permeable catalyst container in gas communication with said gas space, said container comprising a flame arresting material having pores of suitable size to permit gas to pass therethrough while being a barrier to a flame, said container being encased in a gas-permeable hydrophobic solid film comprising PTFE; and
- a catalyst arranged in said catalyst container for converting oxygen gas and hydrogen gas generated within the housing to water vapor.

Claims 8-11 (canceled).

Claim 12 (previously presented). A cell according to Claim 7, wherein said catalyst container is secured to said relief valve to be removable from the housing with said relief valve.

Claim 13 (canceled).

Claim 14 (canceled).

Claim 15 (currently amended). A device for recombining gases in a storage battery; comprising:

a gas-permeable catalyst container, said container comprising a flame arresting material having pores of suitable size to permit gas to pass therethrough and which acts as a barrier to a flame;

a catalyst arranged within said container; and

a gas-permeable hydrophobic solid film encasing said container, said hydrophobic film comprising PTFE.

Claim 16 (canceled).

Claim 17 (canceled).

Claim 18 (previously presented). A device in accordance with claim 15 wherein said film has a thickness in the range of about .002 inches to .003 inches.

Claim 19 (previously presented). A device in accordance with claim 15 wherein said film has a pore size of about .22 microns.

Claims 20-21 (canceled).

Claim 22 (previously presented). A device in accordance with claim 15 wherein said container has an outside diameter of about .6 inches.

Claim 23 (previously presented) A device in accordance with claim 15 wherein said container is cylindrical.

Claim 24 (previously presented). A device in accordance with claim 15 wherein said container has an opening at an end of said container through which the catalyst is added, said opening being sealed closed with an epoxy.

Claim 25 (currently amended). A device in accordance with claim 15 54 having four layers of said tape film.

Claim 26 (canceled).

Claim 27 (currently amended). A vent assembly for sealing a VRLA battery cell having a sealed housing and a gas space within said housing, said device comprising:
a vent body through which gas from inside the housing can vent to outside the housing;

a pressure relief valve member within said vent body to allow excess gas to escape from the housing and which prevents gas outside the housing from entering the housing;

a gas-permeable catalyst container supported on said body to be in gas

communication with said gas space when said vent assembly seals the battery cell, said catalyst container comprising a flame arresting material having pores of suitable size to permit gas to pass therethrough while being a barrier to a flame, said container being encased in a gas-permeable hydrophobic tape film;

a catalyst arranged in said catalyst container for recombining oxygen gas and hydrogen gas generated in the cell to water vapor; and

a cage secured to said body for supporting said catalyst container, said catalyst container fitting within said cage.

Claim 28 (canceled).

Claim 29 (previously presented). An assembly in accordance with claim 27 wherein said cage is secured to the underside of said vent body.

Claim 30 (previously presented). An assembly in accordance with claim 27 wherein said vent body has a recess in which said catalyst container is supported and a retainer fixed to said vent body for securing said catalyst container within said recess.

Claim 31 (canceled).

Claim 32 (canceled).

Claim 33 (previously presented). An assembly in accordance with claim 29 wherein said cage includes openings, and said vent body includes mating pins extending into said openings.

Claim 34. (previously presented). An assembly in accordance with claim 33 wherein said mating pins are heat staked to secure said cage to said vent body.

Claim 35 (canceled).

Claim 36 (currently amended). An electric cell according to claim 7 wherein said gas-permeable hydrophobic film is ~~a solid film~~ comprises a tape wrapped around said catalyst container.

Claim 37 (canceled).

Claim 38 (currently amended). An assembly in accordance with claim 27 wherein said gas-permeable hydrophobic tape film comprises PTFE.

Claim 39 (canceled).

Claim 40 (currently amended). A device for recombining gases in a storage battery; comprising:

a gas-permeable catalyst container, said container being formed of a flame arresting material having pores of suitable size to permit gas to pass therethrough and which acts as a barrier to a flame;

a catalyst arranged within said container; and

means for making all portions of said container that are gas-permeable impermeable to any liquid water while permitting gas to pass through, said means including a solid form of PTFE wrapped around said container.

Claim 41 (Canceled).

Claim 42. (currently amended) A catalyst device for recombining gases in a storage battery; comprising:

a gas-permeable catalyst container, said container being formed of a flame

arresting material having pores of suitable size to permit gas to pass therethrough and which acts as a barrier to a flame;

a catalyst arranged within said container; and
a PTFE gas-permeable hydrophobic tape solid material attached externally to and surrounding said container in a manner so as to prevent liquid water from passing through said container when said device is combined with said storage battery.

Claim 43 (cancelled).

Claim 44 (previously presented). A device in accordance with claim 15 wherein said film is wrapped around said container.

Claim 45 (currently amended). A device in accordance with claim 40 wherein said PTFE comprises a tape film of PTFE.

Claim 46 (cancelled)

Claim 47 (currently amended). A device in accordance with claim 42 wherein said tape comprises PTFE material is a film and is wrapped around said container.

Claim 48 (currently amended). A device for combining gases within a storage battery; comprising:

a catalyst container having an interior, said container comprising a flame arresting material having pores of suitable size to permit gas to pass between said interior and an exterior of said device and which acts as a barrier to a flame;

a catalyst arranged within said interior, said catalyst capable of reacting oxygen gas and hydrogen gas to form water vapor; and

a gas permeable liquid water barrier comprising solid a PTFE tape attached to

said container and positioned to prevent liquid water from passing through said container to said catalyst between said interior of said container and said exterior of said device.

Claim 49 (currently amended). A device in accordance 48 wherein said tape is barrier comprises a film wrapped around said container.

Claim 50 (previously presented). A device in accordance with claim 15 wherein said flame arrestor comprises a ceramic material.

Claim 51 (previously presented). A vent assembly for sealing a VRLA cell having a sealed housing and a gas space within said housing and comprising a catalyst device in accordance with claim 42, said vent assembly further comprising:

a vent body through which gas from inside the housing can vent to outside the housing;

a pressure relief valve member within said vent body to allow excess gas to escape from the housing and which prevents gas outside the housing from entering the housing; and

said catalyst container being supported on said vent body to be in gas communication with said gas space when said vent assembly seals said cell.

Claim 52 (previously presented). A vent assembly for sealing a VRLA cell having a sealed housing and a gas space within said housing and comprising a catalyst device in accordance with claim 40, said vent assembly further comprising:

a vent body through which gas from inside the housing can vent to outside the housing;

a pressure relief valve member within said vent body to allow excess gas to escape from the housing and which prevents gas outside the housing from entering the housing; and

said catalyst container being supported on said vent body to be in gas communication with said gas space when said vent assembly seals said cell.

Claim 53 (currently amended). A vent assembly for sealing a VRLA cell having a sealed housing and a gas space within said housing and comprising a catalyst device in accordance with claim 47 48, said vent assembly further comprising:

a vent body through which gas from inside the housing can vent to outside the housing;

a pressure relief valve member within said vent body to allow excess gas to escape from the housing and which prevents gas outside the housing from entering the housing; and

said catalyst container being supported on said vent body to be in gas communication with said gas space when said vent assembly seals said cell.

54 (new): A device according to Claim 15, wherein said solid film of PTFE comprises a tape wrapped around said catalyst container.

55 (new): A device according to Claim 49, wherein said PTFE tape has a side end extending beyond one of a top end and a bottom end of said catalyst container during fabrication of said device, said tape side end being pressed flat against said one of said ends of said catalyst container to encase the entire container.